APPENDIX

Changes to Specification:

The following is a marked-up version of the amended paragraph:

[0001] The invention completes the output signal calculation procedure by taking into account the remainders of integer divisions carried out when the output signal from the previous samples is calculated. This calculation is done according to the following equation (here indicated in the particular case of a second-order cell):

$$y(n) = Q\left(\frac{Q\left(\frac{scf \cdot x(n) + b_1 \cdot x(n-1) + b_2 \cdot x(n-2)}{K}\right) - a_1 \cdot y(n-1) - a_2 \cdot y(n-2) + Q\left(\frac{-a_1 \underline{\cdot}\, r(n-1) - a_{\underline{2}\cancel{+}}\, \underline{\cdot}\, r(n-\underline{2})}{scf}\right)}{scf}\right)$$

instead of:

$$y(n) = Q\left(\frac{Q\left(\frac{scf \cdot x(n) + b_1 \cdot x(n-1) + b_2 \cdot x(n-2)}{K}\right) - a_1 \cdot y(n-1) - a_2 \cdot y(n-2)}{scf}\right)$$

for a classical calculation of an implemented recursive digital filter in which Q( ) is the non-linear quantification operator when integers are divided and "scf" is the scale factor chosen.

[0002] Finally, the larger the scale factor, the smaller the error due to quantification of the coefficients and the larger the number of filters that can be made. Hence it is preferable to use a DSP with a word length of 32 bits. This enables the value scf~~ech~~$=2^{32-16-2}=2^{14}=16384$ to be taken for the scale factor.